

REMARKS

Claims 1, 3-10 and 12-18 are pending. Claims 2 and 11 have been canceled.

Claims 1 and 10 have been amended to recite the subject matter of claims 2 and 11, respectively. No new matter has been added by way of the above-amendment.

I. Issues under 35 U.S.C. § 103

The following rejections are pending:

- (A) Claims 1, 4, 6, 10 13 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tabata et al.* (US 2002/0071980) in view of *Ueda et al.* (US 2004/0115515);
- (B) Claims 2, 3, 7-9, 11, 12 and 16-18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tabata et al.* in view of *Ueda et al.* as applied to claims 1 and 10 above, and further in view of *Kohler et al.* (US 2003/0224223); and
- (C) Claims 5 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Tabata et al.* in view of *Ueda et al.* as applied to claims 1 and 10 above, and further in view of *Dube et al.* (US 2004/0089357).

Applicants respectfully traverse Rejection (A), Rejection (B) and Rejection (C).

In order to further clarify the distinction between the present invention and the cited prior art, Applicants have amended claims 1 and 10 to recite that the subject matter of claims 2 and 11, respectively, i.e., that the adhesive layer contains a polymer material having a proton conducting property. In view of the fact that claims 2 and 11 are not included in Rejection (A), Rejection (A) is rendered moot. Applicants now comment on Rejection (B) and Rejection (C).

In view of the above-amendment to claims 1 and 10, all of the independent claims 1, 7, 10 and 16 require the presence of a polymer material having a proton conducting property. Applicants respectfully submit that the cited references (as combined in Rejection (B) and as combined in Rejection (C)) fail to teach this feature of the invention.

Prior to the above-amendment, the feature of a polymer material having a proton conducting property could be found in claims 2, 7, 11 and 16. As such, we now respond to the Examiner's comments on claims 2, 7, 11 and 16. The Examiner has considered claims 2, 7, 11 and 16 to be obvious over the combination of Tabata et al. with Ueda et al. and Kohler et al. Specifically, the Examiner asserts that it would be obvious to use the polymer material having a proton conducting property in Kohler et al. in the fuel cell of Tabata et al. However, Applicants respectfully disagree based on the firm belief that it is not possible to apply the technology of Kohler et al. to the invention described in Tabata et al., for the following reason.

A solid polymer electrolyte fuel cell described in Tabata et al. includes an anode-side gas diffusion layer, an anode catalyst region, a solid polymer electrolyte membrane, a cathode catalyst region, and a cathode-side gas diffusion layer, characterized in that at least one of the anode catalyst region and the cathode catalyst region includes two layers of a first catalyst layer and a second catalyst layer. In other words, the fuel cell described in Tabata et al. is a laminate constituted by at least six layers from the anode-side gas diffusion layer to the cathode-side gas diffusion layer.

On the other hand, the technology of Kohler et al. is directed to a membrane-electrode-assembly including the anode GDL (anode gas diffusion layer), the anode catalyst layer, the ionomer membrane (polymer electrolyte membrane), the cathode catalyst layer and the cathode GDL (cathode gas diffusion layer) as described in paragraph [0025], and is limited to the one constituted by five layers from the anode gas diffusion layer to the cathode gas diffusion layer as becomes clear from the expression "consists of five layers" in paragraph [0025] of Kohler et al. Therefore, the technology of Kohler et al. is not applicable to the fuel cell described in Tabata et al., and there is no suggestion or motivation to do so.

Further, at page 3 in the outstanding Office Action, it is stated that "The Kohler reference teaches the concept of using a carbon black containing adhesive paste to laminate two electrode layers ..." The Examiner has alleged that Kohler et al. mentions the concept of laminating two catalyst layers using an adhesive. However, Kohler et al. only mentions that the gas diffusion layer and the catalyst layer are laminated using an adhesive, and by no means

discloses that a plurality of catalyst layers are laminated using an adhesive as presently claimed.

As the MPEP directs, all the claim limitations must be taught or suggested by the prior art to establish a *prima facie* case of obviousness. See MPEP § 2143.03. In view of the fact that Kohler et al. do not fairly suggest using the carbon black containing adhesive in the solid polymer electrolyte fuel cell described in Tabata et al., a *prima facie* case of obviousness cannot be said to exist and withdrawal of Rejection (B) is respectfully requested.

With respect to Rejection (C), this rejection is also not tenable, since Dube et al fail to cure the deficiencies of Tabata et al. and Ueda et al., i.e., Dube et al. fail to teach the presence of a polymer material having a proton conducting property. As such, withdrawal of Rejection (C) is respectfully requested.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Conclusion


In view of the above remarks, it is believed that claims are allowable.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq., Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

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